



ABSTRACT OF THE DISCLOSURE

Disclosed and claimed is the use of a liquid jet intradermal administration apparatus that administers a composition: without a needle; and in the epidermis, dermis and/or hypodermis, such as a Pigjet apparatus, for administering bovine vaccines or immunogenic compositions, especially bovine plasmid vaccines or immunogenic compositions. Accordingly, the invention involves bovine immunogenic or vaccine compositions in such an apparatus, and methods for vaccinating bovines or for inducing an immunogenic response in bovines employing such an apparatus, as well as the apparatus containing bovine immunogenic or vaccine compositions.

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